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FEDERAL-STATE COOPERATIVE
SNOW SURVEYS and WATER SUPPLY FORECASTS
for

OREGON

UNITED STATES DEPARTMENT of AGRICULTURE
SOIL CONSERVATION SERVICE
and

OREGON AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with the Oregon State Engineer, U. S. Forest Service, National Park Service and other Federal, State and local organizations. MAY 1, 1957

UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

TO RECIPIENTS OF COOPERATIVE SNOW SURVEY AND WATER SUPPLY FORECAST REPORTS:

Snow surveys in the west are conducted each year at more than 1200 snow courses. Basin and Province or State snow survey reports summarizing the results of the measurements and forecasts of seasonal runoff and water supply are issued by the Soil Conservation Service, U. S. Department of Agriculture and some of its cooperators; the Water Rights Branch of the British Columbia Department of Lands and Forests; and the California Division of Water Resources.

Copies of the various federal-state cooperative snow survey reports listed below may be secured by writing to:

Head, Water Supply Forecasting Section Soil Conservation Service 209 S. W. 5th Avenue Portland 4, Oregon

BASIN REPORTS:

Colorado, Rio Grande, and Platte-Arkansas River Basins	Issued monthly February through May by SCS and Colorado Experiment Station, Fort Collins, Colorado.*
Columbia River Basin	Issued monthly January through May by Soil Conservation Service, Boise, Idaho.*
Upper Missouri River Basin	Issued monthly February through May by SCS and Montana Agricultural Experiment Station, Bozeman Montana.*
West-Wide Water Supply Outlook	Issued April by Soil Conservation Service and Cooperators, Portland, Oregon.

)	TATE REPORTS:	
	Arizona	Issued semi-monthly January 15 through April 1 by SCS and Salt River Valley Water Users Association, Phoenix, Arizona.*
	Nevada	Issued monthly February through April by SCS and Nevada State Engineer, Reno, Nevada.* $$
	Oregon	Issued monthly January through May by SCS, Portland, Oregon, and Oregon Agricultural Experiment Station.*
	Utah	Issued monthly January through May by SCS, Salt Lake City, Utah, and State Engineer of Utah and Utah Agricultural Experiment Station.*
	Washington	Issued monthly February through May by SCS, Spokane, Washington, and State Department of Conservation and Development.*
	Wyoming	Issued monthly February through May by SCS, Casper, Wyoming, and State Engineer of Wyoming.*

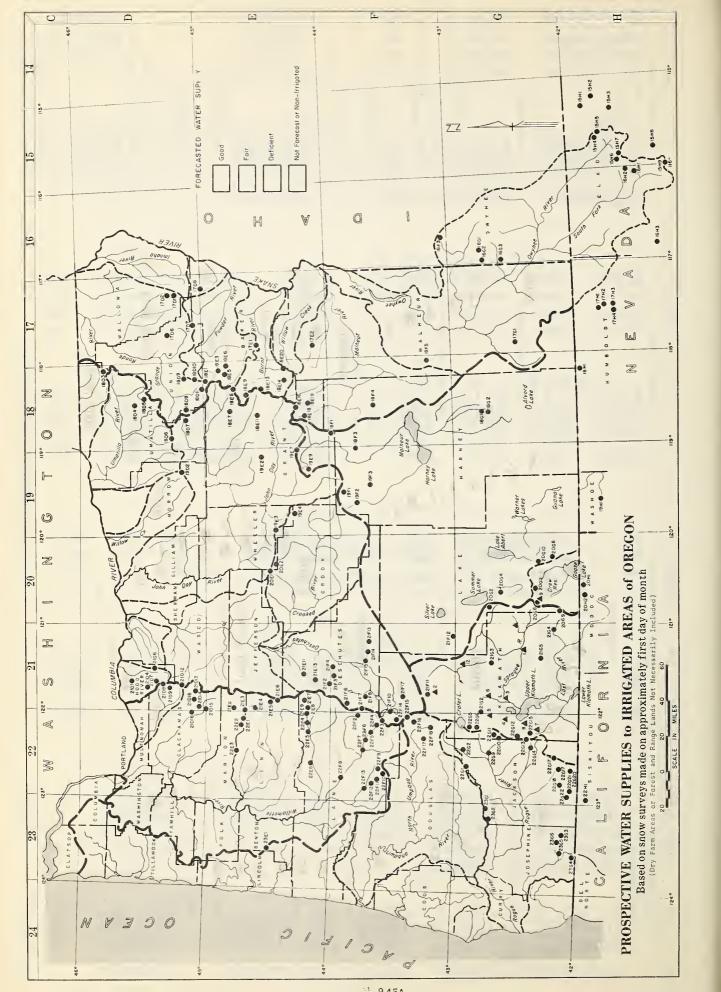
*Special reports are issued as needed.

The British Columbia reports are issued February 1 through June 1 and may be secured from Comptroller, Water Rights Branch, Department of Lands and Forests, Parliament Building, Victoria, B. C.

The California reports are issued monthly February 1 through May 1 and may be secured from Division of Water Resources, California Department of Public Works, Sacremento, California.

The annual water supply forecasts of the Weather Bureau are available in monthly bulletins published from January through May. These bulletins entitled, "Water Supply Forecasts for the Western United States" may be obtained from River Forecast Center, Weather Bureau, 712 Federal Office Building, Kansas City 6, Missouri.

Number Name Location Elev.	ARRING LAKE BASIN 1, 10, 10, 15, 15, 15, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16
Number Name Locetion Elec. Pup. Rge.	Champion 15 25 25 25 25 25 25 25
Number Nume Location Elev.	Sizer Notice 198 20 20 20 20 20 20 20 2
Desiron Sec. Prp. Rge. Desiron Sec. Prp. Rge. UPPER COLUMBIA ORANIAGE (Lower Snoke in Oregon) ONTHER HITER BASIN ONTHER HITER BASIN ONTHER HITER BASIN OS OS OS OS OS OS OS O	172 Part Creek Part Pa



FEDERAL-STATE COOPERATIVE

SNOW SURVEYS AND WATER SUPPLY FORECASTS

FOR

OREGON

Issued

May 8, 1957

Report Prepared

by

W. T. Frost, Snow Survey Supervisor and Manes Barton, Assistant Snow Survey Supervisor

> Soil Conservation Service and Oregon Agricultural Experiment Station 209 S. W. 5th Avenue Portland 4, Oregon

> > Issued by:

Thomas P. Helseth
State Conservationist
Soil Conservation Service

F. Earl Price
Director
Oregon Agricultural Experiment Station

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WATER SUPPLY OUTLOOK

FOR OREGON

MAY 1. 1957

Outlook for Oregon's irrigation water supply remains "fair to excellent". April weather made very little change in the outlook. Deficient water supplies will be experienced in the main Crooked River basin and in many small watersheds which head below the usual mountain snow zone. Reservoired water supplies are excellent throughout the state.

- SNOW-COVER: April storms have been few in number and have increased the snow-pack only at the highest elevations. April temperatures have melted off most of the snow at low and moderate elevations. May I snow surveys show snow-cover is generally below normal, roughly 80 per cent average. Only 5 high mountain snow courses have above normal readings. These courses are in the extreme southeast and northeast corners of the state.
- SOIL-MOISTURE: Watershed soils throughout the state have been extremely well wetted at all elevations.
- RESERVOIRED WATER: Stored water in 20 irrigation reservoirs is 24 per cent above average and at a high of 97 per cent of capacity. At no time in recent years has the total reservoired water outlook been as satisfactory.
- PRECIPITATION: Statewide, April precipitation averaged just above normal.
- STREAMFLOW: Adequate water supplies are foreseen for most of Oregon except in those smaller watersheds heading in lower or moderate elevations where late stream shortages will occur earlier than usual.

April streamflow² has been mostly above normal ranging from 133 per cent on Hood River to 95 per cent on the Middle Fork of the Willamette.

From preliminary data furnished by U. S. Weather Bureau, Portland, Oregon.

² From preliminary data furnished by U. S. Geological Survey, Portland, Oregon.

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The following summarized runoff forecasts are based principally on mountain snow cover and on the assumption that precipitation and temperature during the forecast period will be near average. Appreciable deviations from normal of temperature and/or precipitation during the forecast period will correspondingly modify these forecasts.

these forecasts.	Sone	onal Str	eamflow in	Thousands	of Acre F	eet
Basin, Stream	Forecast	% The state of the	Fore-	Inoubanas	01 1101 0 1	15 - Yr.
and	Runoff	15-Yr.	cast	Measure	Runoff*	Average
Station	1957	Avg	Period	1955	1954	1938-52
Columbia River	1901	Avg	1 61 100	+///	4//4	
nr. The Dalles**	100 000 0	106	Apr-Sept.	99400.0	116986-0	97006.0
iff. The pattes**	102,800.0	100	vpt-peh.))40 0.0 .	110/0000) 000 0
			OLUMBIA BASI NAKE IN OREC			
Owyhee River Basin						1
Owyhee Reservoir	400.0	87	Apr-Sept.	250.3	73.7	457.6
Net inflow 1	385.0	88	Apr-July	231.8	70.3	439.8
Malheur River Basin					111	م م
Malheur River,	90.0	110	Apr-Sept.	36.7	44.4	81.5
nr. Drewsey					١, , , ,	(2.0
Malheur River, N. Fk.,	70.0	110	Apr-Sept.	35.1	45.9	63.9
at Beulah ²						
			6			
Burnt River Basin	24.2	44		30.0	00.0	1 7 0
Burnt River,	36.0	86	Apr-Sept.	18.2	23.0	41.8
nr. Hereford						
Daniel Diana Daniel						
Powder River Basin	64.0	101	Amer Comb	22.0	20.0	63.4
Powder River, near Baker	63.0	102	Apr-Sept.	32.9	39•9 38•4	61.6
near baker	03.0	102	Apr-July	32.1	30.4	01.0
Imnaha River Basin						
Imnaha River	255.0	84	Apr-Sept.	255.8	253.7	303.4
at Imnaha	~ > > • • •	0.4	whi -peb o	2))•0	27961	J∪J•4
a o zmrana						
Grande Ronde River						
Basin						
Wallowa River, E.Fk.,	10.5	93	Apr-Sept.	10.3	11.3	11.3
nr. Joseph4	8.5	92	Apr-July	8.3	8.9	9.2
Hurricane Creek,	42.0	93	Apr-Sept.	40.9	43.1	45.1
nr. Joseph	4.00	,,,	PP	4		-124-
Lostine River,	116.0	94	Apr-Sept.	103.8	118.5	123.5
nr. Lostine		2-4	100			
Bear Creek,	64.0	93	Apr-Sept.	62.3	63.9	69.1
nr. Wallowa	. ,-		11 -1			,
Catherine Creek,	65.0	91	Apr-Sept.	52.1	50.6	71.1
nr. Union						
Grande Ronde River,	145.0	82	Apr-Sept.	181.4	122.3	176.9
at La Grande	-					
			, A 77 A	Coolesia		

^{*} Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. Most 1956 records not available at this time.

**Forecast by Boise Office, Soil Conservation Service. Corrected for storage.

1 From U. S. B. R. records of inflow.

² Observed flow / change in storage in Agency Valley Reservoir.

³ Observed flow plus change in storage in Unity Reservoir. 4 Includes power plant tailrace.

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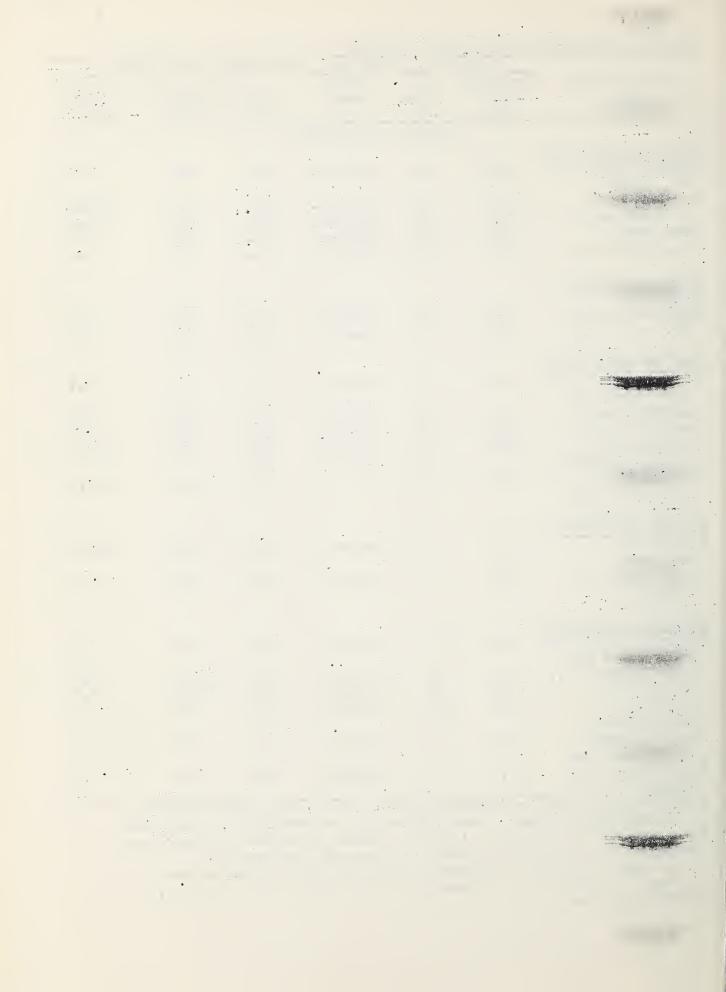
Streamflow Forecasts	- May 1,	1957 (Cor	nt'd.)			
			eamflow in	Thousands	of Acre Fe	15 - Yr.
Basin, Stream	Forecast	7	Fore-	Management	Dunaffx	
and	Runoff	15-Yr.	cast		Runoff*	Average 1938-52
Station	1957	Avg.	Period	1955	1954	1930-32
		LOWER CO	LUMBIA BASI	N		
Umatilla River Basin						
Umatilla River,	80.0	92	Apr-Sept.	106.6	72.6	86.8
nr. Gibbon		·				
Umatilla River,	155.0	92	Apr-Sept.	215.2	117.7	167.4
at Pendleton	142.0	92	Apr-July	210.4	111.5	154.5
McKay Creek	19.0	68	Apr-Sept.	44.3	17.0	27.8
nr. Pilot Rock	18.7	68	Apr-July	44.3	16.9	27.6
Walla Walla River						
Basin					(()	70 7
Walla Walla R., So.	58.0	82	Apr-Sept.	71.3	66.4	70.5
Fk., nr. Milton	48.0	83	Apr-July	58.7	52.6	57.8
TI D. D. D.						
John Day River Basin			A C	7 0	77	8.3
Strawberry Cr.	7.6	92	Apr-Sept.	7.2	7 .7	0.5
nr. Prairie City	40.0	٥٢	Ann Cont	37.6	42.5	50.4
John Day River	48.0	95 05	Apr-Sept.	33:4	37.5	45.3
at Prairie City	43.0	95	Apr-July	90.9	92.8	121.7
John Day River, Mid.Fk. at Ritter	118.0	97	Apr-Sept.	90.9	92.00	TCT# 1
John Day River,	240.0	97	Apr-Sept.	165.2	229.7	248.4
N.Fk., nr. Dale	240.0	71	whtpeh	10902	22701	240.4
Morke, III . Date						
Crooked River Basin						
Crooked R.,	80.0	64	Apr-Sept.	77.8	79.5	124.2d
nr. Post		- •	P	,,,,,,	.,	
Ochoco Res., net	17.0	61	Apr-Sept.	13.2	18.6	28.0
inflow						
Deschutes River Basi						
Crescent Creek	21.0	99	Apr-Sept.	26.5	43.0	21.2
at Crescent Lake ⁶						
Little Deschutes R.,	73.0	81.	Apr-Sept.	69.1	134.4	89.6
nr. Lapine	65.0	82	Apr-July	61.0	117.8	79.1
Odell Cr.,	30.0	103	Apr-Sept.	28.7	37•5	29.2
nr. Crescent				1 7 0	0.0	(0.1
Deschutes River,	55.0	91	Apr-Sept.	45.8	80.8	60.4
below Snow Creek	7.00.0	00	A C	01.3	71.0.0	700 6
Crane Prairie Res.	108.0	90	Apr-Sept.	94.1	149.9	120.6

^{*} Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. Most 1956 records not available at this time.

d 1938-39 excepted.

⁵ Observed flow of Ochoco Cr. / Canal / changes in storage of Ochoco Res.

Observed flow / changes in storage of Crescent Lake Reservoir.
From State Engineer's file #3220a, tabulating total inflow to Crane Prairie Reservoir and outflow, showing the loss in the Reservoir.



Streamflow Forecasts	- May 1	1957 (Con	t'd.)			4
01 COURT TON T OT OCOR 02	Sea	sonal Str	eamflow in	Thousands	of Acre Fe	ek
Basin, Stream and	Forecast Runoff	% 15-Yr.	Fore- cast	Measured	Runoff*	15 - Yr. Average
Station	1957	Avg.	Period	1955	1954	1938-52
Deschutes River Basin (Continued)	<u>1</u>					
Deschutes River	485.0	95	Apr-Sept.	575.8	697.9	511.0
at Benham Falla	330.0	95	Apr-July	379.5	469.0	346.3
Tumalo Creek, nr. Bend9	42.0	87	Apr-Sept.	48.6	59.8	Д8•3
Squaw Creek nr. Sisters	45.0	91	Apr-Sept.	46.7	62.7	49•3
White River,	135.0	89	Apr-Sept.	170.5	176.3	152.0
below Tygh Valley	118.0	88	Apr-July	151.8	157.7	134.7
Hood River Basin	700.0			077.1	303.0	316.0
Hood River, W. Fk.,	138.0	94	Apr-Sept.	211.4	197.8	146.9 127.3
nr. Dee	116.0 282.0	91 92	Apr-July Apr-Sept.	185.2 424.0	172.4 399.4	306.1
Hood River, nr. Hood River10	238.0	92 92	Apr-July	358 . 6	343.1	259.7
Row River, nr. Dorena Mid.Fk. Willamette R. blw.No.Fk.nr.Oakridge McKenzie R., at McKenzie Bridge McKenzie River, nr. Vida South Santiam at Waterloo North Santiam at Mehamall Willamette River at Salemll Clackamas River, at Big Bottom Oak Grove Fk. abv. Power Intake		83 83 96 91 91 90 93 93 92 92 99 100 86 87 86 86	Apr-Sept. Apr-July	168.9 164.0 1071.0 699.4 689.8 527.3 1574.6 1310.4 973.5 929.9 1122.9 944.8 7039.2 6195.1 198.9 164.2 203.6 160.0	84.5 78.8 823.1 699.6 668.8 497.4 1336.4 1064.0 592.6 532.0 955.4 742.6 4902.3 3985.3 201.3 164.0 217.8 168.8	100.5 96.1 798.3 704.5 564.7 429.9 1194.7 978.0 558.0 524.6 841.5 748.0 4354.5 3863.4 163.6 132.5 185.7 145.3
Clackamas River abv. Three Lynx Clackamas River	510.0 430.0 680.0	85 85 87	Apr-Sept. Apr-July Apr-Sept.	812.0 705.2 1079.4	722.7 616.4 932.4	599•3 507•4 777•2
nr. Cazadero	600.0	89	Apr-July	946.8	798.9	668.7

^{*} Discharge data from preliminary records of U. S. Geological Survey and

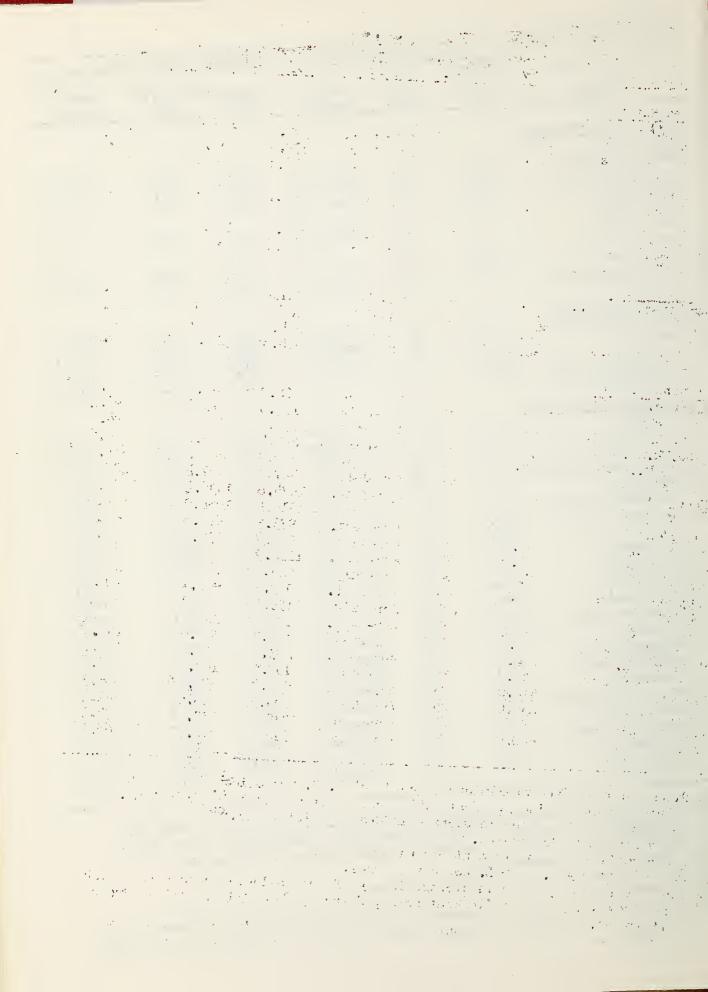
Oregon State Engineer. Most 1956 records not available at this time.

8 Observed flow / changes in storage in Crane Prairie, Wickiup and Crescent Lake Reservoirs.

⁹ Observed flow / Columbia Southern Canal.

¹⁰ Observed flow / P. P. & L. Co. power canal.

¹¹ Observed flow / changes in storage in any of the following reservoirs which are above the station: Lookout Point, Detroit, Fern Ridge, Cottage Grove and Dorena.



Streamflow Forecasts - May 1, 1957 (Cont'd.)

Streamflow Forecasts	- May 1, 1	L957 (Cor	nt'd.)			
			reamflow in	Thousands of	of Acre Fe	et
Basin, Stream	Forecast	%	Fore-		D 00	15 - Yr.
and	Runoff	15-Yr.	cast	Measured		Average
Station	1957	Avg.	Period	1955	1954	1938-52
	OREGON	V AND CAI	LIFORNIA COA	ST BASINS		
Umpqua River Basin	- 1/			-14-	070 0	761.0
No. Umpqua River,	146.0	89	Apr-Sept.	146.2	218.0	164.0
below Lake Creek12				4	04.0	(1 0
Clearwater River,	55.0	86	Apr-Sept.	69.9	86.2	64.2
above Trap Creek						
Dames Dimes Basis						
Rogue River Basin	Not E	orecast	A C	2.0	6.4	6.0
Hyatt Res., net Inflow 13	NOC F	brecast	Apr-Sept.	3.0	0.4	0.0
Fourmile Lake,	6.0	86	Anna Cam t	8.3	3.5	7.0
net Inflow 14	0.0	00	Apr-Sept.	0.5	2•2	1.0
Little Butte Cr. N. Ek.	13.0	87	Apr-Sept.	23.9	25.6	14.9
below Fish Lake 15	• ±J•0	01	whtseh	23.7	25.0	±4.● }
Rogue R. So. Fk.	70.0	92	Apr-Sept.	71.4	78.4	76.1
nr. Prospect16	60.0	92	Apr-July	60.8	65.5	65.1
Rogue R. Mid. Fk.,	69.0	93	Apr-Sept.	73.8	83.0	74.3
nr. Prospect17	55.0	94	Apr-July	58.4	64.3	58.7
Rogue River,	280.0	88	Apr-Sept.	307.6	375.1	316.5
above Prospect	235.0	89	Apr-July	257.1	305.9	265.1
Rogue River,	615.0	90	Apr-Sept.	653.0	741.2	680.8
below South Fork	500.0	90	Apr-July	531.4	588.9	553.0
Rogue River, at Raygo	-	90	Apr-Sept.	839.8	987.3	905.6
nr. Central Point	685.0	90	Apr-July	702.7	803.8	760.7
Rogue River.	775.0	91	Apr-Sept.	859.1	967.9	852.8d
at Grants Pass		,-	·pup	-,,,-	<i>y</i> = 1 • <i>y</i>	
Applegate River,	95.0	82	Apr-Sept.	80.4	154.7	116 . 0 ^d
nr. Copper				•		
Illinois River,	160.0	88	Apr-Sept.	194.5	191.7	181.2
at Kerby						
•						

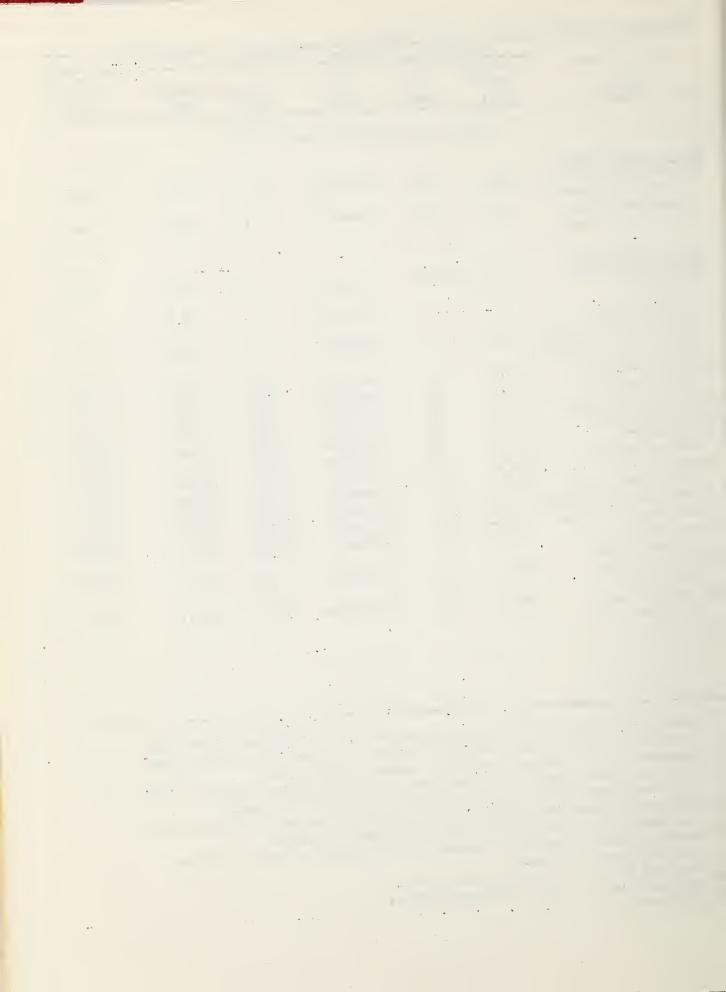
Observed flow / storage changes in Lemelo #1 Reservoir
Observed flow of Keene Creek at Hyatt Prairie / storage changes / 1600 a.f.
for estimated evaporation during April-September period.

Observed outflow into Cascade Canal / storage changes / 1600 a.f. for estimated evaporation during April-September period.

^{*}Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. Most 1956 records not available at this time.

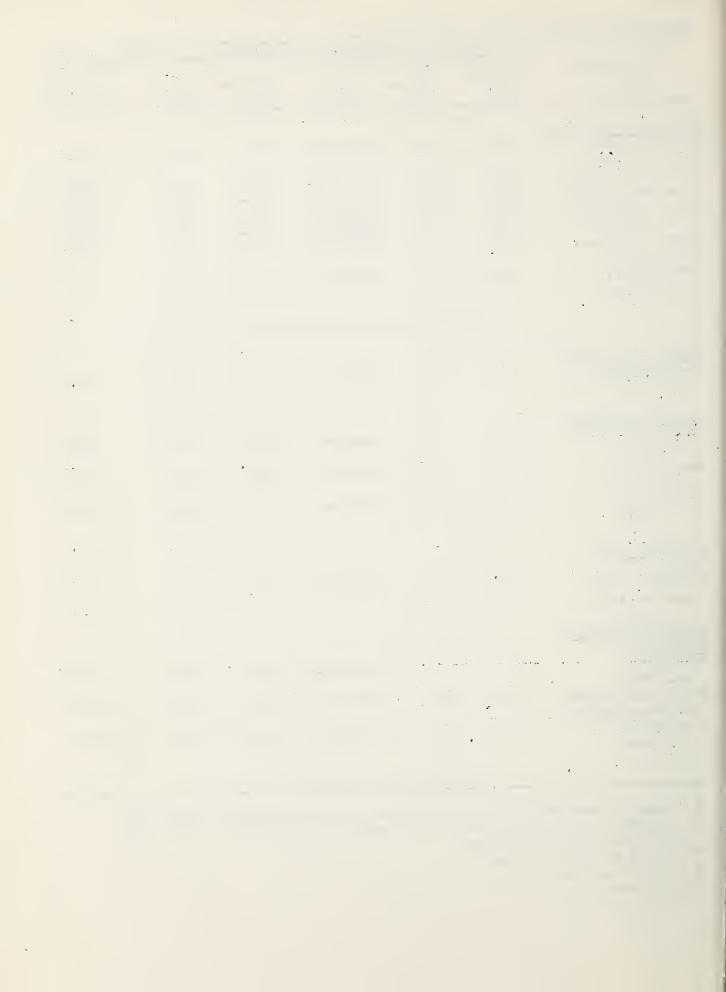
Observed flow / changes in storage in Fish Lake Reservoir / 90% of Cascade Canal inflow.

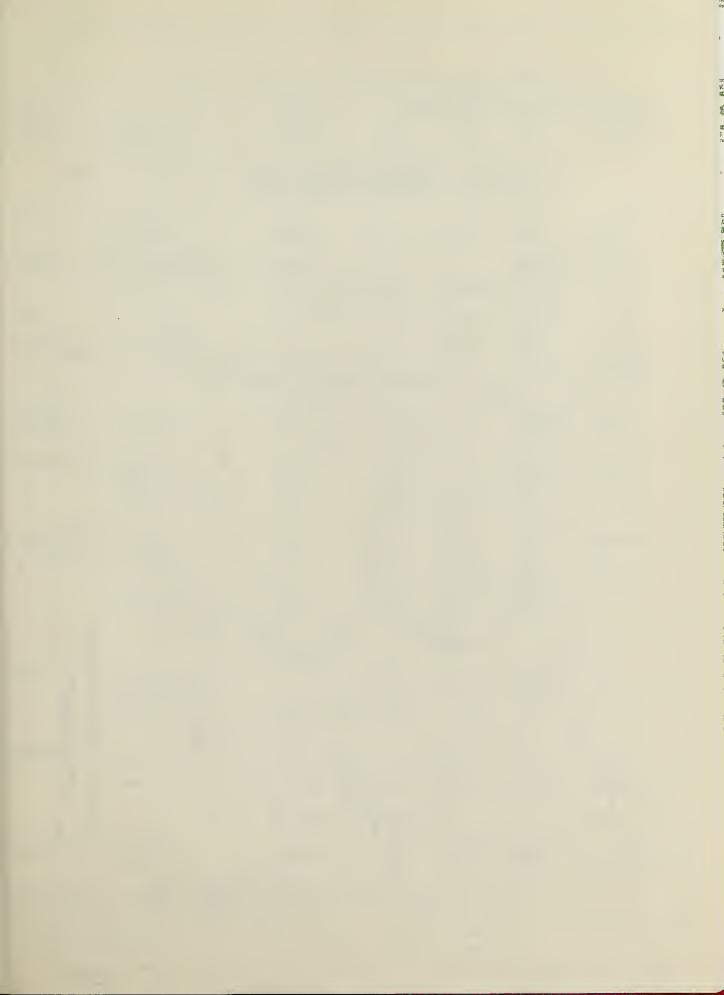
¹⁶ Observed flow / South Fork Power Canal.
17 Observed flow / Middle Fork Power Canal.
d 1938 excepted.

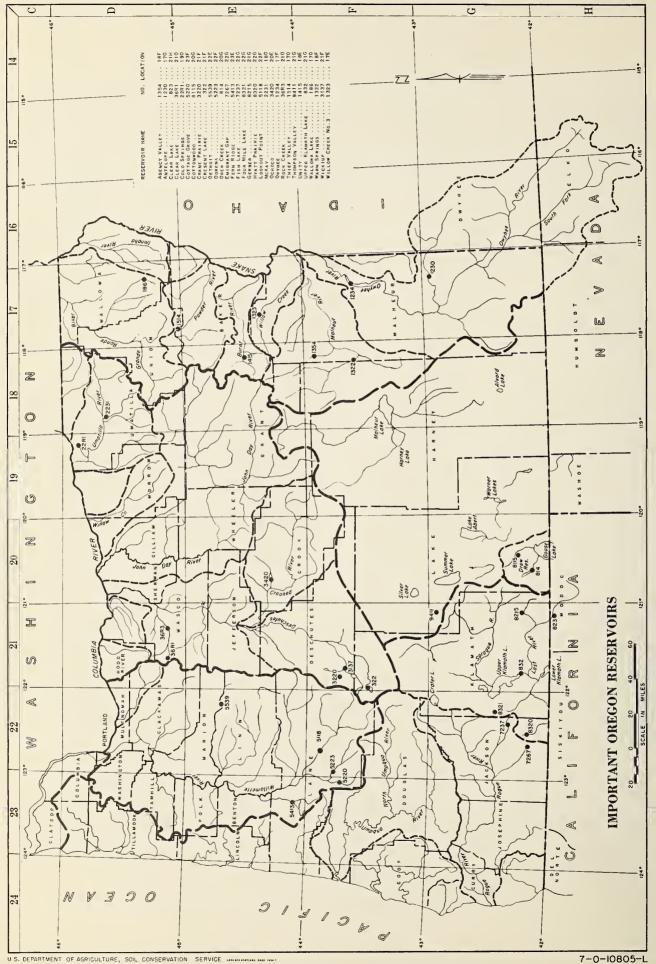


Streamflow Forecasts - May 1, 1957 (Cont'd.)								
	Sea	sonal Str	eamflow in	Thousands	of Acre Fe	eet		
Basin, Stream	Forecast	%	Fore-		D 00	15 - Yr.		
and	Runoff	15-Yr.	cast	Measured		Average 1938-52		
Station	1957	Avg	Period	1955	1954	1930-52		
Klamath River Basin								
Sprague River,	275.0	109	Apr-Sept.	155.1	351.1	252.6		
nr. Chiloquin	217.0	109	npr-popos	27742	<i></i>			
Williamson River,	475.0	117	Apr-Sept.	346.9	643.0	406.0		
below Sprague R.	395.0	116	Apr-July	277.6	553.9	340.2		
Upper Klamatho Lake	615.0	117	Apr-Sept.	409.6	834.5	525.6		
net Inflow 18	490.0	116	Apr-July	320.4	687.1	424.1		
Clear Lake Res.,	38.0	77	Apr-Sept.	34.8	26.0	49.4		
net Inflow	18.0	75	Apr-July	12.0	17.5	24.1		
Gerber Res., net Inflow	10.0	15	Apr-July	12.0	1147	∵ त• ∓		
Hec THI TOW								
	GF	REAT BASIN	INTERIOR I	ORAINAGE				
Goose Lake Basin					- 0 -			
Drew Reservoir,	22.0	72	Apr-July	13.3	28.3	30.4d		
net Inflow								
Warner Lake Basin								
Twentymile Cr.	13.0	62	Apr-June	12.1	8.9	21.1 ^e		
nr. Adel								
Deep Cr.,	50.0	74	Apr-June	43.2	56.0	67.2		
above Adel					~			
Honey Cr.,	11.0	71	Apr-June	7•9	13.7	15.6 ^f		
nr. Plush								
Characan Diagon								
Chewaucan River Basin								
Chewaucan River.	59.0	81	Apr-June	27.6	97.8	72.8		
nr. Paisley	37. 0	01		2160	71.0	7200		
Malheur and Harney								
Lakes Basin								
Trout Cr.,	10.0	104	Apr-Sept.	4.1	3.5	9.6		
nr. Denio Donner und Blitzen	75.0	112	Apr-Sept.	54.9	45.0	66.2		
R.,nr.Frenchglen	75.0	113	whr-sehr.	24•9	45.0	66.3		
Silvies River	80.0	78	Apr-Sept.	42.0	51.7	102.3		
nr. Burns			F F) -			

^{*} Discharge data from preliminary records of U. S. Geological Survey and
Oregon State Engineer. Most 1956 records not available at this time.
From COPCO records of inflow.
d 1942-43 and 1945 excepted.
e 1938-40 excepted.
f 1942 excepted.







BASIN		USABLE	USA	BLE STOR	AGE - 100	O ACRE FEET
and/or STREAM	RESERVOIR	CAPACITY 1000 AF	1957	1956	1955	15-Yr.Av. 1938-52
		PER COLUMBIA ower Snake i		,		
Owyhee	Antelope Owyhee	36.5 715.0	N.R. 715.0	N.R. 660.0	17.5 323.7	30.8 ^b 668.5
Malheur	Warm Springs Agency Valley	191.0 60.0	192.4 60.0	174.8 59.2	46•4 33•3	148.9 57.0
Burnt	Unity	25•2	24.4	24.8	13.2	22.0
Grande Ronde	e Wallowa Lake	40.9	38.0	26.4	19.1	23.8
	<u>n</u>	OWER COLUMBI	A DRAINAG	E		
<u>Jmatilla</u>	McKay Cold Springs	74•0 50•0	71.9 50.0	70.8 49.2	40.6 49.2	66.9 48.4
Deschutes	Ochoco Crescent Lake Crane Prairie Wickiup	46.0 68.0 55.3 200.0	46.8 66.2 59.5 199.8	46.5 52.9 48.5 199.9	26.0 21.3 39.6 198.4	35.7 43.2 41.7 110.8°
<u>Willamette</u>	Cottage Grove Dorena Fern Ridge Detroit Lookout Point	30.1 ^a 70.5 ^a 94.2 ^a 340.0 ^a 350.0 ^a	22.8 51.1 91.5 274.8 273.8	23.9 53.9 80.6 238.0 258.0	24.4 54.3 94.2 102.5 186.0	24.2c 74.0d
	OREGON A	ND CALIFORNI	A COAST D	RAINAGE		
Rogue	Fish Lake Fourmile Lake Emigrant Gap Hyatt Prairie	7.8 16.1 8.3 16.1	8.1 16.6 8.4 18.0	5.9 6.4 8.3 12.4	5.6 10.4 5.3 11.6	5.6 9.6 8.2 9.7
Klamath	Upper Klamath Ik. Gerber Clear Lake	584.0 94.0 440.2*	553.9 92.6 394.8	538.5 82.7 477.8	533 .2 46.5 251.8	499.9 60.6e 253.3e
		INTERIOR D	RAINAGE			
Goose Lake	Cottonwood Drew	4.1 62.5	4.1 64.4	3.6 64.7		3•3 ^f 56•9 ^g

b 1948-50 excepted. c 1938-42 excepted.

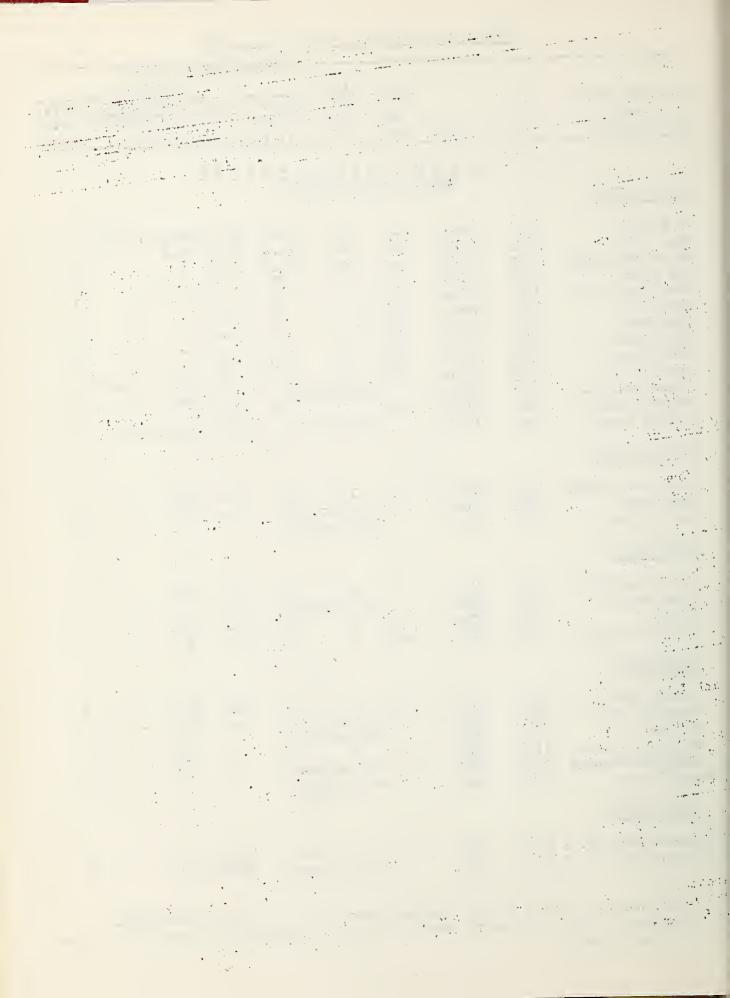
f 1942-43 excepted.
g 1942 excepted.

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					NOM COAT	ER MEAS			
DRAINAGE BASIN	No.		Date	1957 Snow	Water	·Water		Record nt(In.)	Prev.
and	or		of		Content			938-52	Yrs.of
SNOW COURSE	State	Elev.	Survey		(In.)				Record
	UPPE	R COI	U M B	I A D	RAII	<u>A</u> G E			
OWYHEE RIVER		TOWER	SNARE	IN OREC	žOIV				
Jack Peak Bear Creek Upper Jack Creek Fox Creek Lower Jack Creek Rodeo Flat Big Bend Fry Canyon Gold Creek Silver City	16H4 15H1 16H2 15H2 16H1 15H6 15H4 15H7 15H5 16F3	8420 7800 7250 6800 6800 6800 6700 6700 6600 6400	5-1 5-2 4-30 5-2 4-30 4-30 4-30 4-30 5-5	93 62 28 T 0 T T 0	36.4 24.4 11.3 T 0.0 T T 0.0 0.0 7.6	No pr 19.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0	evious 21.8 4.9 17.1	record	2 1 8 1 8 1
South Mtn. No. 2 Taylor Canyon Shumway Ranch	16G1 15H9 17F1	6340 6200 4400	No 4-30	t Surv	eyed T	0.3 0.0	14.4	record	3
MALHEUR RIVER									
Blue Mtn. Springs Lake Creek Rock Spring	18E16 18E18 18F1	5900 5120 5100		11 t Surve		1.9	13.8 8.4 		7 3 3
BURNT RIVER									
Dooley Mountain *Gold Center Tipton Blue Mtn. Summit	17E1 18E8 18E9 18E13	5430 5340 5100 5098	5-1 No 5-1 4-29	0 t Surve 0 0	0.0 eyed 0.0 0.0	0.0	7.8 8.9 8.1		3 1 4 6
POWDER RIVER									
Anthony Lake Goodrich Lake Bourne Dooley Mountain Eilertson Meadows *Gold Center	18E1 18E6 18E5 17E1 18E3 18E8	7125 6775 5800 5430 5400 5340	No 5-1 No	83 t Surve t Surve 0 t Surve t Surve	eyed 0.0 eyed	30.8	34.9		3 2 1 3 2 1
IMNAHA RIVER									
*Aneroid Lake No. 1 *Aneroid Lake No. 2		7480 7000		ort Del ort Del		47.6 ^b 28.6 ^b	37.0 29.5		10 7

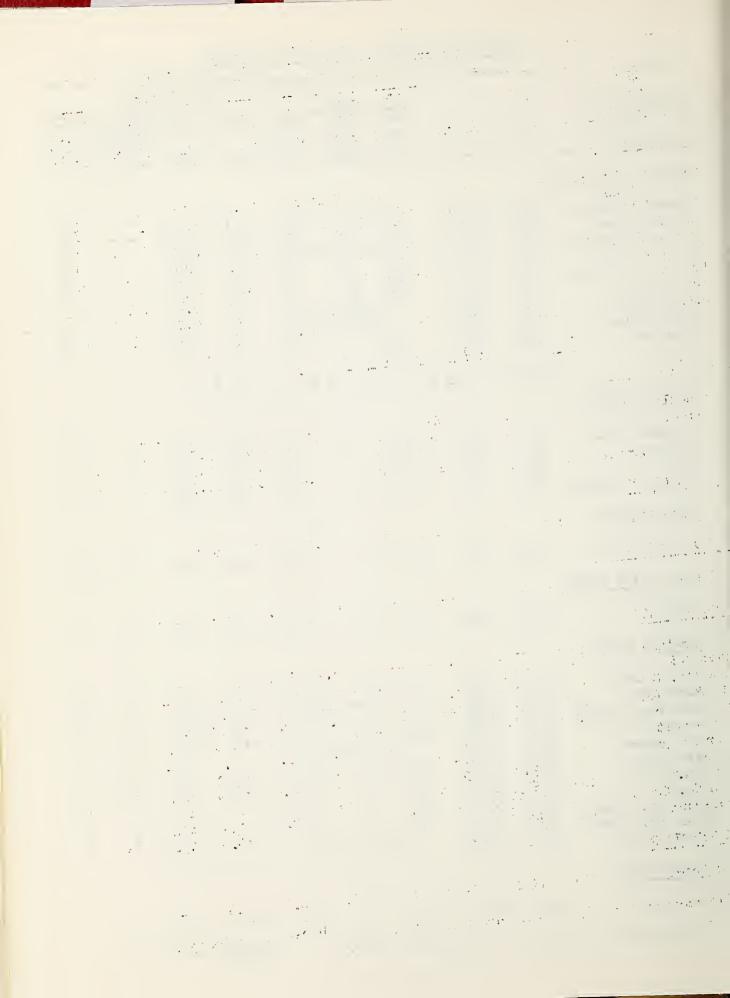
^{**} Not located directly on this drainage area.

** Average is for less than 15 years of record in the 1938-52 period but not less than 5 years.



					NOW COVE				
DRAINAGE BASIN	No.		Date	1957 Snow	Water		Conten	t(In.)	Prev.
and and	or		of	Depth	Conten			1938-52	
SNOW COURSE	State	Elev.	Survey	(In.)	(In _o)	:1955	1955	Avg.	Record
GRANDE RONDE RIVER	1								
Aneroid Lake No. 1 Anthony Lake	18E1	7480 7125	4-29	ort De 83	36.7	47.6b 30.8	31.6		10 3
Aneroid Take No. 2 Moss Spring	1702 1706	7 000 5850	Rep 5-3	ort De 49	1ayed 22.6	28,6 ^b	29°5 30°1		7 3
Bearer Reservoir	1809	5540	4-29	16	6.2	7.8	13.5		3 4
Tollgate	18D3	5070	4-30	30	15.6	11.9	35.2		7
County Line Schoolmarm	18D8 18D7	4800 4775		ot Surv ot Surv			8.4 6.0		1
Meacham	18D5	4300	4-30	0	0.0	0,0	18.1		7
<u> </u>	OWE	R COL	<u>U M B :</u>	I A D	RAII	N A G E			
UMATILIA RIVER									
Arbuckle Mtn.	19D2	51;00	4-29	0	0.0	0.0	15.7		5
Tollgate	1873	5070	4-30	30	15.6	11.9	35.2		5 7
Meacham Emigrant Springs	18D5 18D4	4300	4-30	0	0.0	0,0	18.1		7
Emigrant Springs WILLOW CREEK	TODA	3 925	4–30	0	0.0	0.0	12.7		7
William Office and Control of the Co									
Arbuckle Mtn.	19D2	5400	4-29	0	0.0	0.0	15.7		5
WALLA WALLA RIVER									
Tollgate	18D3	5070	4-30	30	15.6	11.9	35.2		7
JOHN DAY RIVER									
Anthony Lake	18E1	7125	4-29	83	36.7	30.8	31.6		3
Olive Lake Blue Mtn. Springs	18E7 18E 1 6	6000		t Surv			22.8		33751664651
Arbuckle Mtn.	19D2	5900 54 00	5 - 1 4 - 29	11 0	5.0 0.0	1.9 0.0	13.8 15.7		ر ج
Gold Center	18E8	5340		t Surv					í
*Izee Summit	19E9	5293	4-30	0	0.0	0.0	7.7b		6
Starr Ridge Tipton	19E7 18E9	5156 5100	4 - 30 5 - 1	0	0.0	0.0 0.0	4.3 8.9		6 1.
Blue Mtn. Summit	18E13	5098	4-29	ŏ	0.0		8.1		6
Beech Ck. Summit	19E2	4800	4-30	0	0.0	0.0	4.9		5
Schoolmarm CROOKED RIVER	18D7	4775	1/10	t Surve	eyed		6.0		1
Marks Creek	20E1	4540	4-29	0	0.0	0.0	0.5		3
* Not located dir	ectlar o	n this dr	nainaga	2202		b Pant 7	T onti	matad	

^{*} Not located directly on this drainage area. b Partly estimated.



	OTUDAGE	Ditott De							
		-		S	NOW COVI	ER MEAS	UREMEN	TS	
				1957			Pas	t Record	
DRAINAGE BASIN	No.		Date	Snow	Water	:Water		nt(In.)	Prev.
and	or		of	Depth	Content	t:		1938-52	Yrs.of
SNOW COURSE	State	Elev.	Surve	y (In.)	(In.)	:1956	1955	Avg.	Record
DESCHUTES RIVER									
New Dutchman Flat	21F2	6400	4-26	102	49.0	66.1	53.7	65.4**	12
Paulina Lake	21F13	6330	4-29	38	16.4	21.5	18.6		2
Windigo Pass	22F15	5800	4-30	91	44.3	61.5	48.8		8
Three Creeks Mdws.	21E13	5600	4-25	19	9.6b	18.7	21.0		8 8 5 2
Willamette Pass	22F14	5600	5-1	75	35.1	56.3	50.2		ğ
Tangent	21F3	5400	4-26	14	6.9	19.8	16.6		5
Fire Road	21F14	5050	4-29	0	0.0	0.0	4.6	32.7**	11
Cascade Summit	22F3	4880	5-1	38 0	18.2 0.0	35.7	42.3	32 · 177	5
New Crescent Lake *Chemult	21F10 21F11	4800	4-30 5-1	0	0.0	10.5	15.3 1.0b	0.6**	10
Crescent Lake	21F11 21F9	4760 4760	4-30	0	0.0	0.0	9.2	0.000	7
Hogg Pass	21E6	4755	5-1	64	32.3	58.6	62.5	57.2**	10
Mowich	21F17	4700/	4-30	0	0.0			Record	10
Black Pine Spg.	21E11	4600	4-25	Ö	0.0	0.0	5.0		5
Hungry Flat	21F4	4400	4-26	Ö	0.0	0.0	0.0		ź
Paulina Prairie	21F15	4285	4-29	Ö	0.0	0.0			5 1 6
Clear Lake	21D12	3500	4-30	2	1.0	14.5	17.9		6
	21E15								
WILLAMETTE VALLEY S	STREAMS								
SANDY RIVER ¹									
Phlox Point	21D8	5600	4-26	108	52.0	87.4	89.2	59.1**	18
Still Creek	21D9	3700	4-26	26	12.4	32.1	39.8	14.9**	17
Clear Lake	21D12	3500	4-30	2	1.0	14.5	17.9		6
CLACKAMAS RIVER									
Clear Lake	21D12	3500	4-30	2	1.0	14.5	17.9		6
Peavine Ridge	21D14		5-6	T	T	25.1	31.4	17.5**	12
Timothy Lake	21D18	3200	5 - 6	0	0.0	21.1			1
Big Bottom	21D15	2118	5-6	0	0.0	5.8	7.7		5
Lake Harriet	21D16	2045	5-6	0	0.0	0.0	0.0		5 5
SANTIAM RIVERS									
Hogg Pass	21E6	4755	5-1	64	32.3	58.6	62.5	57.2**	10
Santiam Junction	21E5	3990	5-1	0	0.0	23.7		19.1%	9
Marion Forks	21E4	2730	5-1	С	0.0	8.6	16.0		8
Whitewater Bridge		2175	5-1	0	0.0	0.0	T		6 6 6
Detroit (new town)		1500/	5-1	0	0.0	0.0	0.0		6
Detroit Dam	22E2	1580	5-1	0	0.0	0.0	0.0		6
Mill City	22 E3	826	5-1	0	0.0	0.0	0.0		6
Snow Line: Approx	ımately	35 0 01							

^{*} Not located directly on this drainage area.

1 Not strictly a part of the Willamette Drainage; these surveys are indicative of west slope conditions.

^{***} Average is for less than 15 years of record in the 1938-52 period but not less than 5 years.

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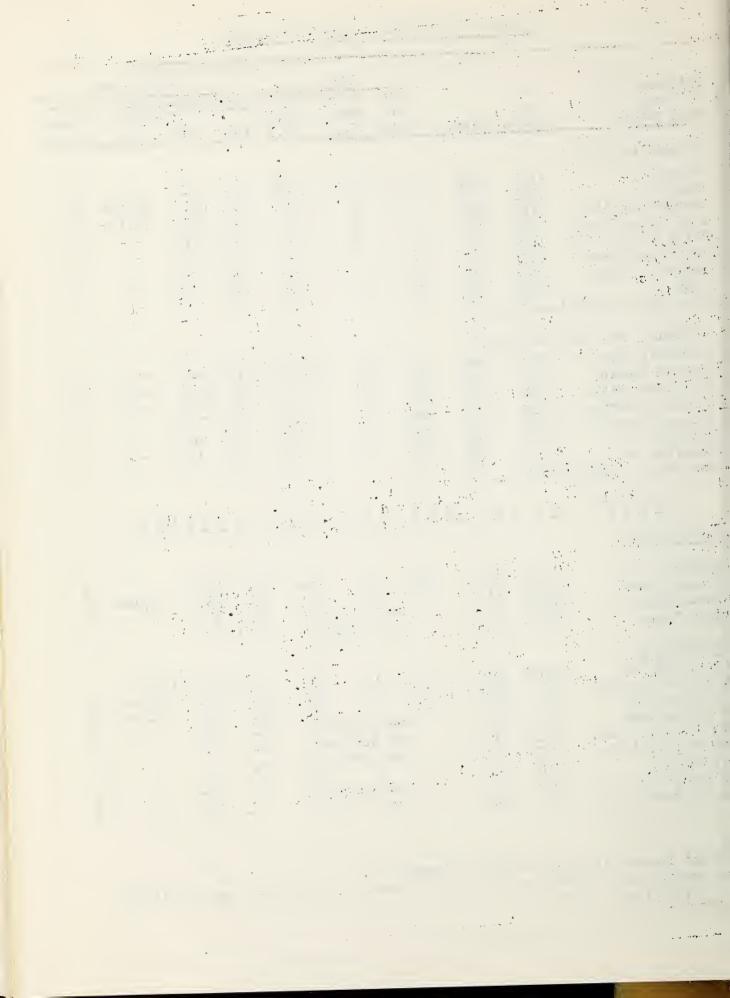
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			SNOW COVER MEASUREMENTS 1957 Past Record							
DRAINAGE BASIN and	No.		Date	Snow	Water Content		Conter	it(In.)	Prev. Yrs.of	
SNOW COURSE	or State	Elev.	of Survey		(In.)		1955	Avg.	Record	
McKENZIE RIVER										
McKenzie Hogg Pass Santiam Junction Dead Horse Grade White Branch Slide Lost Creek Ranch McKenzie Bridge Vida Snow Line: Approxi	21E7 21E6 21E5 21E8 21E9 22E4 22E5 22E6 mately	4800 4755 3990 3800 2800 1956 1372 800 3900'	5-1 5-1 5-1 5-1 5-1 5-1 5-1	65 64 0 0 0 0	35.7b 32.3 0.0 0.0 0.0 0.0 0.0	66.0 58.6 23.7 22.6 0.0 0.0 0.0	62.9 62.5 38.4 37.8 16.8 0.0 0.0	57.2** 19.1** 	2 10 9 2 2 2 2 2	
MIDDLE FORK WILLA	METTE R	IVER								
Willamette Pass Cascade Summit Salt Creek Falls Railroad Overpass McCredie Spring Oakridge Meridian Dam Snow Line: Approxi	22F14 22F3 22F4 22F5 22F6 22F7 22F8	5600 4880 4000 2750 2120 1310 750	5-1 5-1 5-1 5-1 5-1 5-1	75 38 T 0 0 0	35.1 18.2 T 0.0 0.0 0.0 0.0	56.3 35.8 19.8 0.0 0.0 0.0	50.2 42.3 31.8 1.0 0.0 0.0	32.7** 	8 11 7 6 7 6 6	
OREGON A	ND C	ALIF	ORN.	I A C	OASI	DR	AINA	GE		
UMPOUA RIVER										
Windigo Pass Diamond Lake North Umpqua Trap Creek	22F15 22F18 22F16 22F17	5800 53 1 5 4215 3800		91 26 ot Surv ot Surv		61.5 24.8 5.5 0.0	48.8 25.5 14.6	 18.1** 	8 18 2 2	
ROGUE RIVER Wagner Butte *Park Headquarters *Annie Spring *Fourmile Lake Billie Creek Div. *Hyatt Prairie Res. Fish Lake Silver Burn South Fork Canal	22G18 22G5 22G6 22G12 22G13 22G16 22G14 22G2 22G9	6900 6450 6018 6000 5300 4900 4865 3720 3500	4-30 No No 5-1	33 105 71 ot Surv ot Surv 0 ot Surv	eyed eyed 0.0 eyed	No pre 68.8 52.7 37.2 26.3 7.1	58.2 48.0 28.4 23.5 13.6 8.3 15.7	record 62.2** 42.8**	13 16 5 7 4 6 4	

^{*} Not located directly on this drainage area.

^{**} Average is for less than 15 years of record in the 1938-52 period but not less than 5 years.

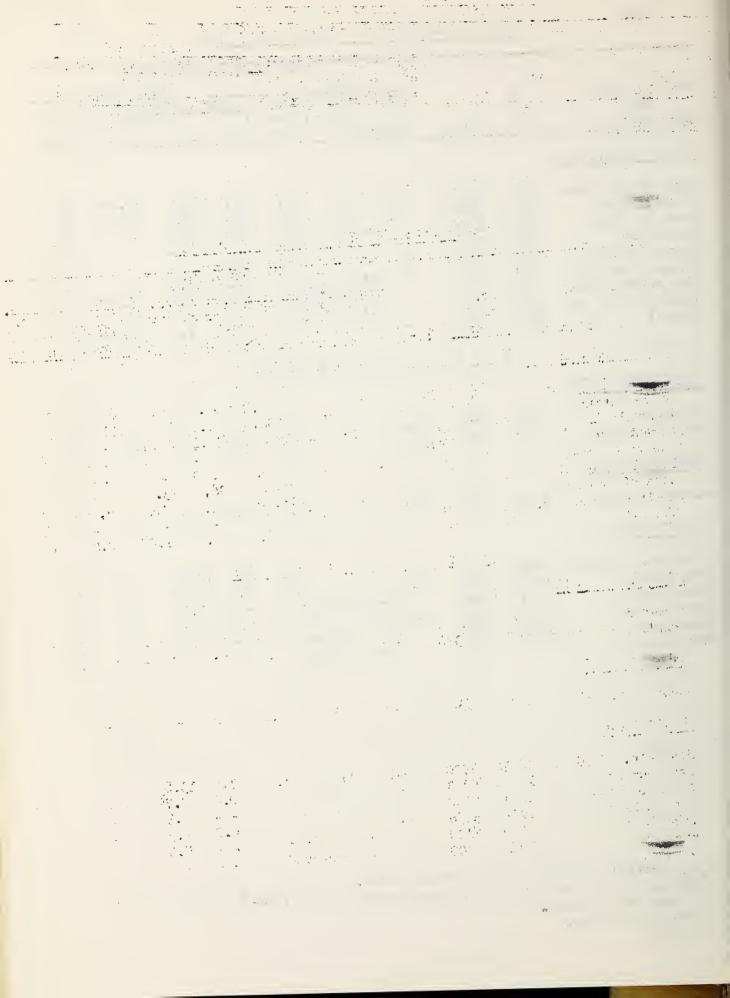
bPartly estimated



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				SNOW COVER MEASUREMENTS 1957 Past Record						
DR	AINAGE BASIN	No.		Date	1957 Snow	Water	:Water	Conten		Prev.
	and	or		of		Content			938-52	Yrs.of
SN	OW COURSE	State	Elev.	Survey	(In.)	(In.)	:1956	1955	Ave.	Record
KI	AMATH LAKE BASIN									
An Fo St *Qu Bi La Hy	rk Headquarters nie Spring urmile Lake rawberry artz Mountain llie Creek Div. ke of the Woods att Prairie Res. emult	22G5 22G6 22G12 20G9 20G6 22G13 22G15 22G16 21F11	6450 6018 6000 5600 5320 5300 4960 4900 4760	4-30 No 5-1 5-1 No Rep	105 71 t Surv 0 0 t Surv ort De t Surv 0	0.0 0.0 eyed layed	68.8 52.7 37.2 0.0 26.3 11.9	58.2 48.0 28.4 23.5 7.8 1.0b	62.2** 42.8** 5.6**	13 16 5 7 10 4
		I	NTER	IOR 1	O R A I	I N A G	E			
GO	OSE IAKE BASIN	-					-			
	rawberry artz Mountain	20G9 20G6	5600 5320	5-1 5-1	0	0.0 0.0	0.0			<u>1</u> 5
CH	EWAUCAN RIVER									
	artz Mountain RNEY BASIN	20G6	5320	5-1	0	0.0	0.0			5
B1 Iz Id St	ue Mtn. Springs ee Summit lewild Camp arr Ridge ke Creek ck Spring	18E16 19E9 18F3 19E7 18E18 18F1	5900 5293 5200 5156 5120 5100	4-30 No	ll 0 t Surve 0 t Surve t Surve	0.0 eyed	1.9	13.8 7.7b 2.3 4.3 8.4		7 .6 3 6 3 3

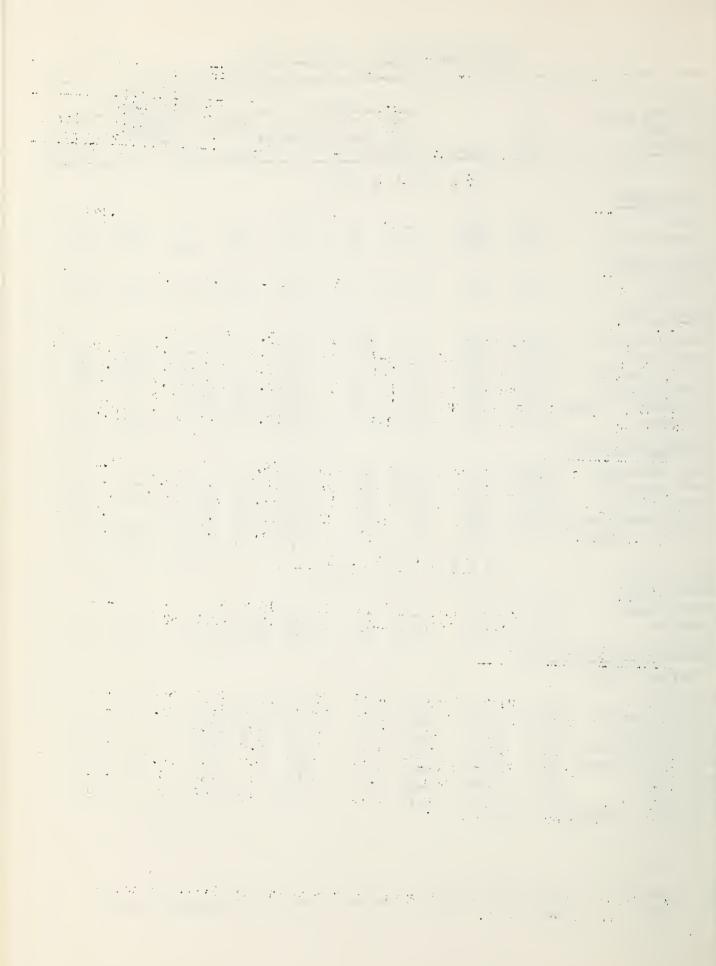
^{*} Not located directly on this drainage area.

^{**} Average is for less than 15 years of record in the 1938-52 period but not less than 5 years. b Partly estimated.

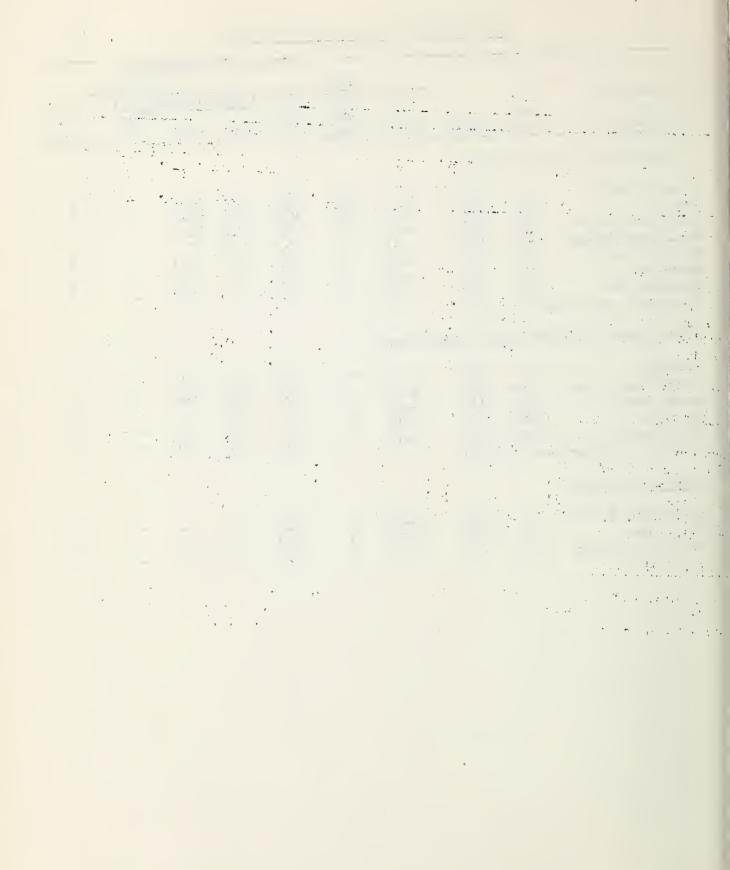


			SNOW COVER MEASUREMENTS						
			1957				D		
DRAINAGE BASIN	No.		Date	Snow	Water Content		Conte	nt(In.) 1938-52	Prev. Yrs.of
SNOW COURSE	State	Elev.	Survey		(In.)	:1956	1955	Avg.	Record
		APRI	L 1,	195	7				
OWYHEE RIVER									
Midas	16H3	7200	4-3	T	T	0.0		2.1**	갶
Disaster Peak	18H1	6500	3-31	22	9.6	17.4	6.5	17.2**	8
UMPQUA RIVER									
Whaleback	22G1	5140	3-30	67	26.8	52.5	32.3	35.1**	19
ROGUE RIVER									
Seven Lakes #1	22 Gl O	6800	4-10	140	65.9	70.4	53.0	51.2	20
Scragg Mtn. Seven Lakes #2	22Hl 22Gll	6200 6200	4-7 4-10	45 91	22.5 40.2	59.1	19.1	29 . 3** 40.8**	14 20
Fourmile Lake	22G12	6000	4-9	46	21.6	41.0	25.2		5
Billie Creek Divide Whaleback	22G13 22G1	5300 5140	4-9 3-30	3 2 67	12.9 26.8	39 .1 52 . 5	23.9	23.4 35.1**	26 1 9
KLAMATH LAKE BASIN	2241	7140	0ر–ر	01	20.0	72.07	J2 • J	J) • #	-/
Seven Lakes #1	22G10	6800	4-10	140	65.9	70.4	53.0	51.2	20
Seven Lakes #2	22G11	6200	4-10	91	40.2	59.1	40.9	40.8**	20
Fourmile Lake Billie Creek Divide	22G12 20G13	6000 5300	4 - 9 4 - 9	46 32	21.6	41.0	25.2 23.9	23.4**	5 26
Lake of the Woods	22G15	4960	3-31	17	5.5	23.8	9.4	9.9	20
		APRI	<u>L 15,</u>	195	<u> 7</u>				
UMPQUA RIVER									
Diamond Lake	22F18	5315	4-15	36 06	15.8	32.1	 lo 1		11
Champion WILLAMETTE VALLEY S	22F9	4500	4-15	26	10.9	40.1	42.4		2
SANTIAM RIVERS	IRLANS								
Hogg Pass	21E6	4755	4-15	79	35.7	69.5	55.6		2
Santiam Junction	21E5	3990	4-15	18	8.2		35.4		3 2 2
Marion Forks	21E4	2730	4-15	4 0	1.7	•	19.6		2
Whitewater Bridge Detroit (new town)	21E3 22E1	2175 1500/	4-15 4-15	0	0.0 0.0	T 0.0	2.2		2 2 2
Detroit Dam	22E2	1580	4-15	0	0.0	0.0	0.0		2
Mill City Snow Line: Approximately	22E3 mately	826 2900 ¹	4-15	0	0.0	0.0	0.0		2

^{**} Average is for less than 15 years of record in the 1938-52 period but not less than 5 years.



					SNOW CO	AM SHV	ASIRE	TENTS	
				1957	DIVON O	74,016 111		st Recor	d
DRAINAGE BASIN	No.		Date	Snow	Water		Conte	ent(In.)	Prev.
and SNOW COURSE	or	7717	of		Content			1938-52	Yrs.of
DIVOW COORDE	State	Elev.	Survey	(In.)	(In.)	:1956	1955	Avg.	Record
MIDDIE FORK WILL	WETTE F	RIVER							
Cascade Summit	22F3	L880	4-15	55	24.8	48.0	36.2		2
Champion	22F9	4500	4-15	26	10.9	40.1	42.4		2
Salt Creek Falls	22F4	4000	4-15	19	8.0	28.8	26.0		2
Railroad Overpass	22F5	2750	4-15	0	0.0	0.0	T		2
McCredie Springs Oakridge	22F6 22F7	2120	4-15	0	0.0	0.0	0.0		2
Meridian Dam	22F8	1310 750	4-15 4-15	0	0.0	0.0	0.0	- -	3
Snow Line: Approxi			4-17	U	0.0	0.0	0.0		J
COAST FORK WILLAM	ETTE RI	VER (Ro	w River)						
Champion	22F9	4500	4-15	26	10.9	40.1	42.4		2
Golden Curry Creek	22F10	3136	4-15	0	0.0	6.8	5.3		2
Weaver Creek	22F11	2440	4-15	0	0.0	0.0	T		:2
Lund Park Layng Creek R. S.	22F12 22F13	1740	4-15	0	0.0	0.0	0.0		2
Snow Line: Approxi		1200 3900'	4-15	0	0.0	0.0	0.0		2
KLAMATH LAKE BASIN									
Quartz Mtn. (COPCO)	9	5504	4-15	0	0.0				9
Quartz Mtn.	20G6	5320	4-15	0	0.0	1.7			í
Lake of the Woods	22G15	4960	4-14	9	4.5		10.7	*** ***	3



CURRENT OREGON STREAMFLOW

		low in Thousar 6 - Mar. 1957	ads of acre-feet Apr. 1957		
BASIN, RIVER and STATION	Total		Total	As percent of 1938-52 average	
UPPER COLUMBIA DRAINAGE (Lower Snake in Oregon)			7.50 5		
Owyhee Res. net inflow	440.0	155	153.5	61	
LOWER COLUMBIA DRAINAGE					
Walla Walla, So.Fk. nr. Milton Umatilla R. nr. Umatilla John Day R. at Service Cr. Deschutes R. at Moody Hood R. and conduit nr. Hood R. Willamette R. at Salemb Willamette R. at Albanyb M.F. Willamette R. below North Fork	209.0 618.0 2380.0 408.0 12110.0 7895.0 1425.0	· ·	18.7 94.7 420.0 552.8 118.7 1783.1 1119.1 238.6	129 112 117 133 108 110	
OREGON AND CALIFORNIA COAST DRAINAGE					
Umpqua R. nr. Elkton Rogue R. at Raygold Upper Klamath Lake net inflow	4270.0 1705.0 1105.0		556.2 345.5 191.2	130	

^a Preliminary data supplied by: U. S. Geological Survey, Current Records Center, Portland, Oregon; The California Oregon Power Co., Medford, Oregon; North and South Boards of Control, Owyhee Project, Nyssa, Oregon; and Office of State Engineer, Salem, Oregon.

b Streamflow adjusted for storage in those of the following reservoirs which are above the station: Lookout Point, Detroit, Fern Ridge, Cottage Grove and Dorena.

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		Table 1	The first of the second	in an experience of the first
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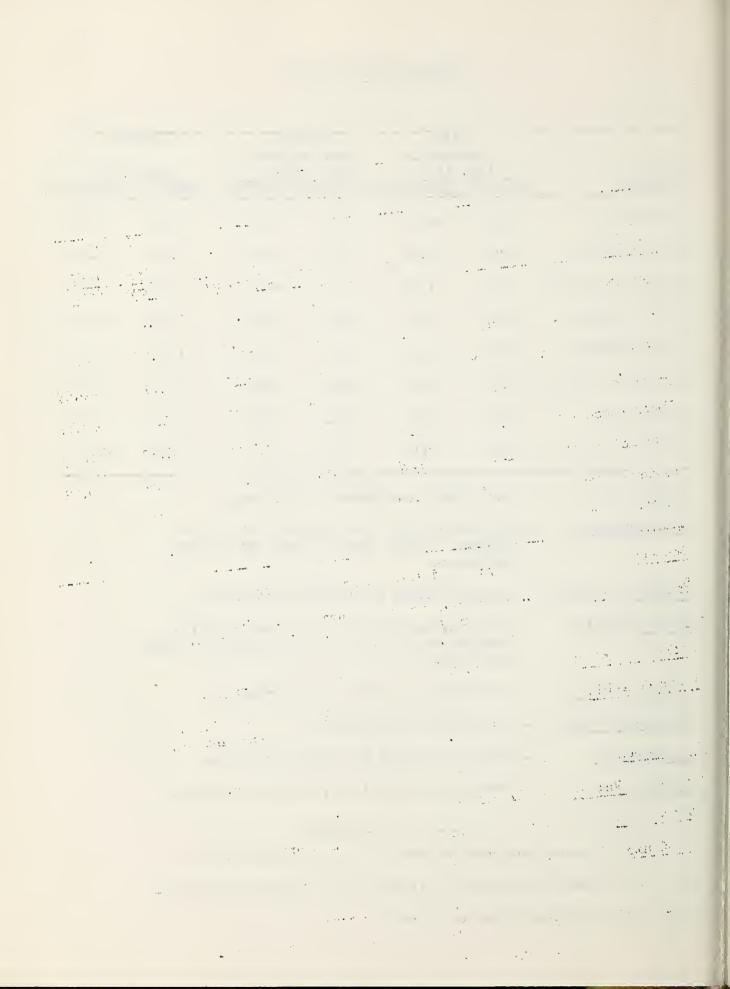
OREGON PRECIPITATIONa

***	FALL		WINT		SPRING		
DRAINAGE		1956	DecJanFeb Mar. 1956-57		April	1957	
DIVISIONS		Departureb		Departureb		Departureb	
Southeastern	3.41	+0.57	5.70	+0.68	1.09	+0.20	
Blue Mountains	3.68	-1.69	9.02	-0.10	1.38	-0.07	
Wallowa Mountains	4.04	-1.88	8.97	+0.42	1.96	+0.09	
Lower Columbia	2.65	-2.58	9.88	+1.00	1.24	+0.14	
Upper Deschutes	2.62	-1.29	6.14	-0.55	1.10	+0.33	
Willamette Valley	12.21	-4.24	27.91	-0.65	3.25	+0.02	
Southwestern	6.90	-0.45	15.11	+0.47	1.17	-0.26	
South-Central	3.76	+0.12	6.67	+0.01	1.00	+0.23	
Southeastern -	- Owyhee	and lower	Malheur d	rainages.			
Blue Mountains	- Upper valleys of the Umatilla, John Day and Malheur, and the Powder, Burnt and Silvies drainages.						
Wallewa Mountains	- Imnaha, Wallowa and Catherine drainages.						
Lower Columbia	- Lower valleys of the Walla Walla, Umatilla, John Day and Deschutes, and the Hood and Sandy drainages.						
Upper Deschutes	- Upper	Deschutes	and Crooke	d drainages	•		
Willamette Valley	- All Wi	.llamette d	rainages.				
Southwestern	- Umpqua	, Rogue and	d Williams	on drainage	S∙		
South-Central	- Spragu	e, Lost and	d Interior	Basin drai	nages.		

a - Preliminary analysis furnished by U. S. Weather Bureau.

b - Departure from 15-year (1938-52) drainage division average.

Note - Precipitation shown in inches.



The following organizations cooperate in the Oregon Snow Survey work:

STATE

Idaho Cooperative Snow Surveys Nevada Cooperative Snow Surveys

Oregon Agricultural Experiment Station

Oregon State Engineer and corps of State Watermasters

Oregon State Highway Engineers

Soil Conservation Districts of Oregon

FEDERAL

Department of Agriculture

Cooperative Extension Service

Forest Service

Soil Conservation Service

Department of Commerce

Weather Bureau

Department of the Interior

Bonneville Power Administration

Bureau of Reclamation

Fish and Wildlife Service

Geological Survey

Indian Service

National Park Service

Department of National Defense

Army Engineer Corps

PUBLIC UTILITIES

California-Pacific Utilities Company

Pacific Power and Light Company

Portland General Electric Company

The California Oregon Power Company

MUNICIPALITIES

City of Baker

City of La Grande

City of The Dalles

City of Walla Walla

IRRIGATION DISTRICTS

Associated Ditch Companies

Central Oregon Irrigation District

Deschutes County Municipal Improvement District

East Fork Irrigation District

Grants Pass Irrigation District

Jordan Valley Irrigation District

Lakeview Water Users, Incorporated

Medford Irrigation District

North Board of Control - Owyhee Project

North Unit Irrigation District

Ochoco Irrigation District

Rogue River Irrigation District

South Board of Control - Owyhee Project

Talent Irrigation District

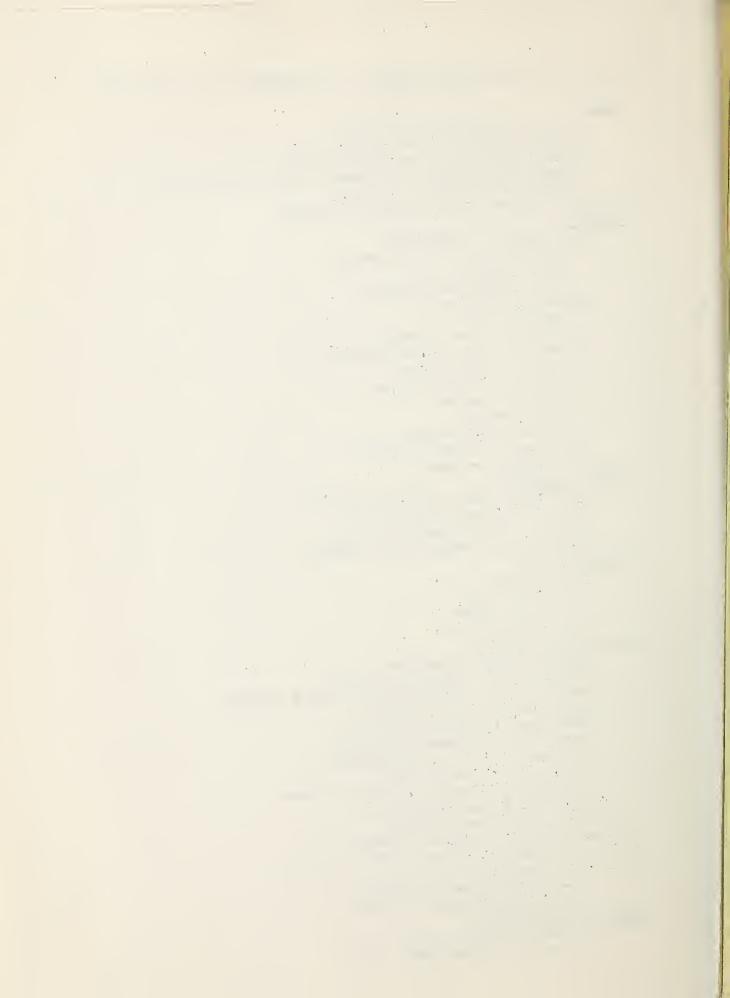
Vale-Oregon Irrigation District

Warmsprings Irrigation District

PRIVATE ORGANIZATIONS

Amalgamated Sugar Company

The Crag Rats, Hood River, Oregon





Federal - State - Private COOPERATIVE SNOW SURVEYS

Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"WATER IS THE WEST'S GREATEST RESOURCE"





